2010 Military Health System Conference

MHS Disease Management Program

Current Results and Future Direction

Sharing Knowledge: Achieving Breakthrough Performance

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TMA/OCMO/PHMMD

Learning Objectives

- Understand how the TMA DM program has been implemented to target high utilization beneficiaries with asthma, CHF, diabetes and COPD

- Understand program evaluation outcomes for the initial portion of the DM program

- Be aware of the ongoing DM program expansion

Overview

- Program rationale, history & enrollment
- Status of present programs
  - Evaluation methods
  - Current outcomes
    - Utilization measures
    - Survey results
    - Return on investment (ROI)

- Program expansion
  - COPD
  - Depression & anxiety
  - Cancer screening
- Future program directions and goals
  - DM Advisory Committee
  - MHSPHP

DM program rationale, history & enrollment

DM Program Rationale

- NDAA '07, Sec. 734, Disease & Chronic Care Management requires
  - Fully integrated program
  - Uniform policies
  - Meet recognized accreditation standards
  - Specific outcome measures
  - These diseases to be included:
    - Diabetes
    - Cancer
    - Heart disease
    - Asthma
    - COPD
    - Depression
    - Anxiety disorders

DM Program History

- **MCSCs chosen to implement program**
  - Already had small DM pilot programs
- **Focus on high utilization case-patients**
- **Disease/condition rollouts**
  - September 2006: asthma and CHF
  - June 2007: diabetes
  - September 2009: COPD
- **Lewin evaluation contract (2006)**

Asthma Population Definition

- Sources: HEDIS, MHSPHP, OCMO
- Meet at least one of four criteria in BOTH of past 12 mo. periods:
  - Four Rx fills for 30 days of asthma meds except leukotriene modifiers alone.
  - One emergency (ER) visit (confirmed by E&M code) with a primary Dx of asthma
  - One acute hospitalization with asthma as principal Dx
  - Four outpatient visits (confirmed by E&M code) with a Dx of asthma in any position along with two Rx dispensing events
- Inclusion codes: 493
- Exclusions codes: 491.20, 491.21, 491.22, 492, 492.0, 492.8, 493.2-493.22, 496, 506.4, 518.1, 518.2 (COPD)
- Confirmation E&M CPT codes:
  - ER Visit: 99281-99285
  - OP Visit: 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275

Asthma Stratification (Jul '09)

Level		%
1	≤ 0 IP stays, 0 ER visits, 4 OP visits, & 5 short-acting Rx, but if no L-T Rx, increase to level 2	65.4
2	≤ 0 IP stays, 0 ER visits, 9 OP visits, & 14 short-acting Rx, but if no L-T Rx, increase to level 3	23.6
3	≤ 0 IP stays, 1 ER visits,15 OP visits, & 24 short-acting Rx, but if no L-T Rx, increase to level 4	6.5
4	≥1 IP stays, 2 ER visits,16 OP visits & 25 short Rx	4.5

ER visit or inpatient admission MUST have asthma diagnosis listed in the **First** diagnosis field to count toward utilization level. OP visit MUST have asthma diagnosis listed in the **First or Second** diagnosis field to count toward utilization level.

July '09 Stratified Asthma Population, By Region

Level	North	South	West	Total
1	19,080	17,924	16,168	53,162
2	6,399	6,715	6,080	19,194
3	1,822	1,812	1,656	5,290
4	1,362	1,318	986	3,666
Total	28,633	27,769	24,880	**81,312**

CHF Population Definition

- Sources: HEDIS, MHSPHP, OCMO
- Any of the following criteria during the prior 12 months:
  - One acute inpatient admission with a diagnosis of CHF in any position
  - One emergency (ER) visit (confirmed by E&M code) with a Dx of CHF in any position
  - Two outpatient visits (confirmed by E&M code) with a Dx of CHF in any position
- Inclusion codes: 428, 402.11, 402.91, 404.03, 404.11, 404.13, 404.91, 404.93, 398.91
- Confirmation E&M CPT codes:
  - ER Visit: 99281-99285
  - OP Visit: 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275

CHF Stratification (Jul '09)

Level		%
1	≤ 0 IP stays, 0 ER visits, & 4 OP visits	59.1
2	≤ 0 IP stays, 1 ER visits, & 9 OP visits	11.9
3	≤ 1 IP stays, 1 ER visits, & 15 OP visits	19.4
4	≥ 2 IP stays, 2 ER visits, or ≥ 16 OP visits	9.6

ER visit, OP visit, and IP admission MUST have CHF diagnosis listed in the **First or Second** diagnosis field to count toward utilization level.

July '09 Stratified CHF Population, By Region

Level	North	South	West	Total
1	1,437	2,263	1,228	4,928
2	307	402	279	988
3	493	658	486	1,619
4	264	382	150	796
Total	2,501	3,705	2,125	**8,331**

Diabetes Population Definition

- Sources: HEDIS, MHSPHP, OCMO
- Meets one of the four inclusion criteria over past 24 mos.:
  - One acute inpatient admission with a Dx of diabetes in any position or an admission DRG for diabetes
  - One emergency (ER) visit (confirmed by E&M code) with a Dx of diabetes in any position
  - Two outpatient visits (confirmed by E&M code) with a Dx of diabetes in any position
  - At least four diabetic Rx events over the past 24 months, excluding metformin alone
- Inclusion codes: Any 250.xx code, along with 357.2, 362.0, 366.41, 648.0
- Exclusions codes: 256.4, 251.8, 962.0, 648.8
- Confirmation E&M CPT codes:
  - ER Visit: 99281-99285
  - OP Visit: 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275

Diabetes Stratification (Jul '09)

Level		%
1	≤ 0 IP stays, 0 ER visits, 9 OP visits, & 19 Rx fills, but if no HbA1c test, increase to level 2	60.2
2	≤ 0 IP stays, 0 ER visits, 15 OP visits, & 29 Rx fills, but if no HbA1c test, increase to level 3	28.1
3	≤ 0 IP stays, 1 ER visits, 20 OP visits, & 39 Rx fills, but if no HbA1c test, increase to level 4	6.1
4	≥ 1 IP stays, 2 ER visits, 21 OP visits, or 40 Rx fills	5.6

ER visit, OP visit, and IP admission MUST have diabetes diagnosis listed in the **First or Second** diagnosis field to count toward utilization level.

# July '09 Stratified Diabetes Population, By Region

| Level	North	South	West	Total
1	41,586	56,219	38,379	136,184
2	21,344	24,660	17,528	63,532
3	4,671	5,594	3,569	13,924
4	4,171	5,052	3,460	12,683
Total	71,772	91,525	63,026	**226,323**

DM Program Candidates

- TMA-identified high-utilization patients through June 2009

  - Four levels of combined IP, ER, OP and Rx utilization

  - Additional clinical factors

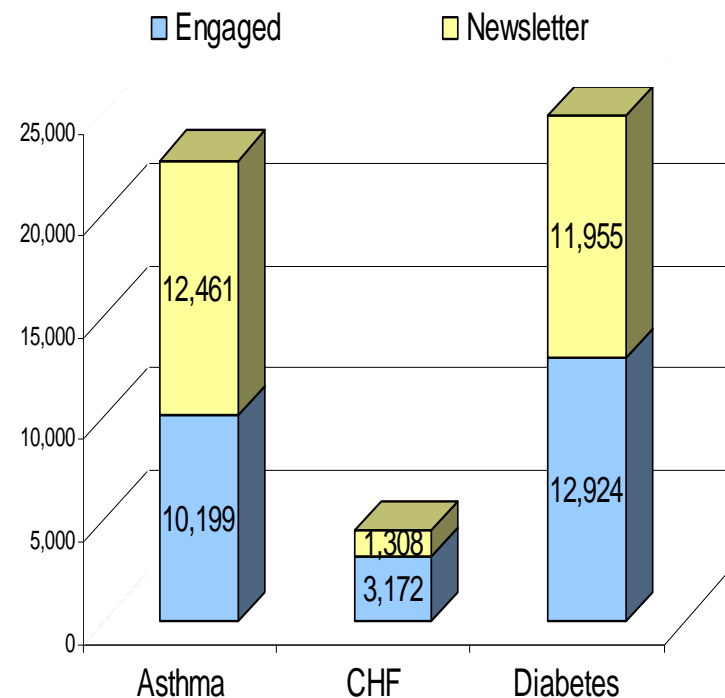 - Levels 3 and 4 (higher) are enrolled as candidates

Asthma
50,690

CHF
8,951

120

32

1,308

2,092

Diabetes
62,606
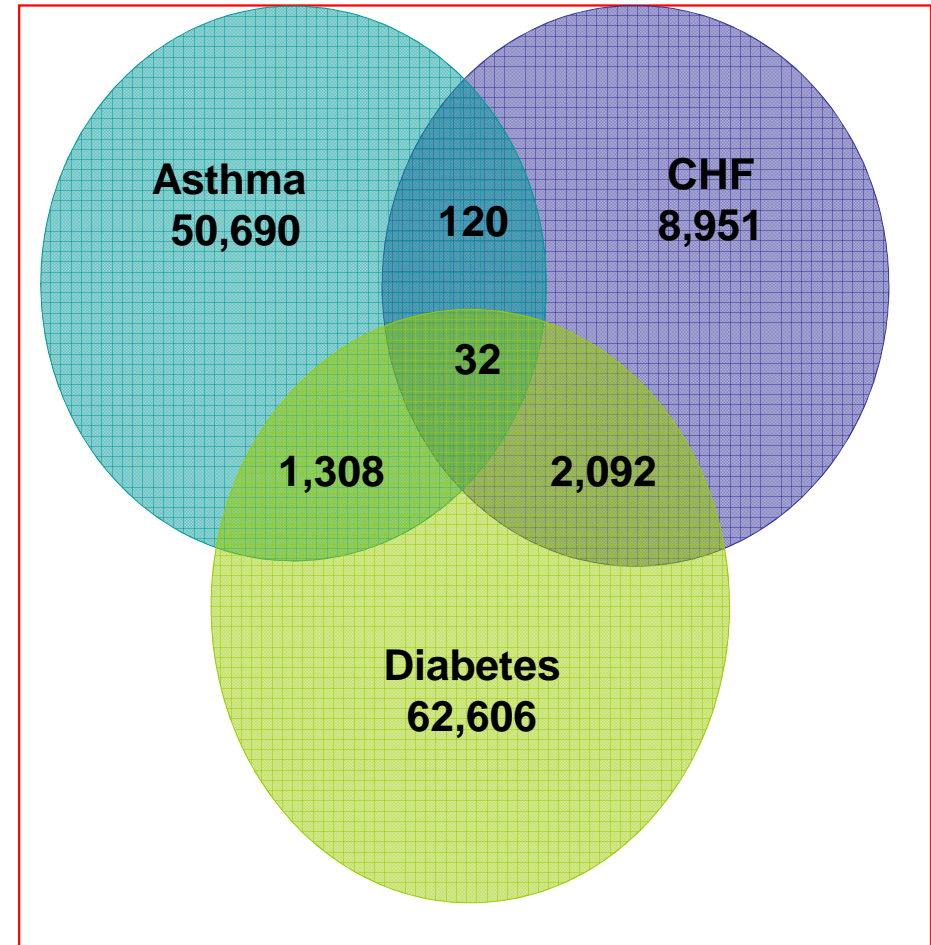
DM Participation Status by Disease
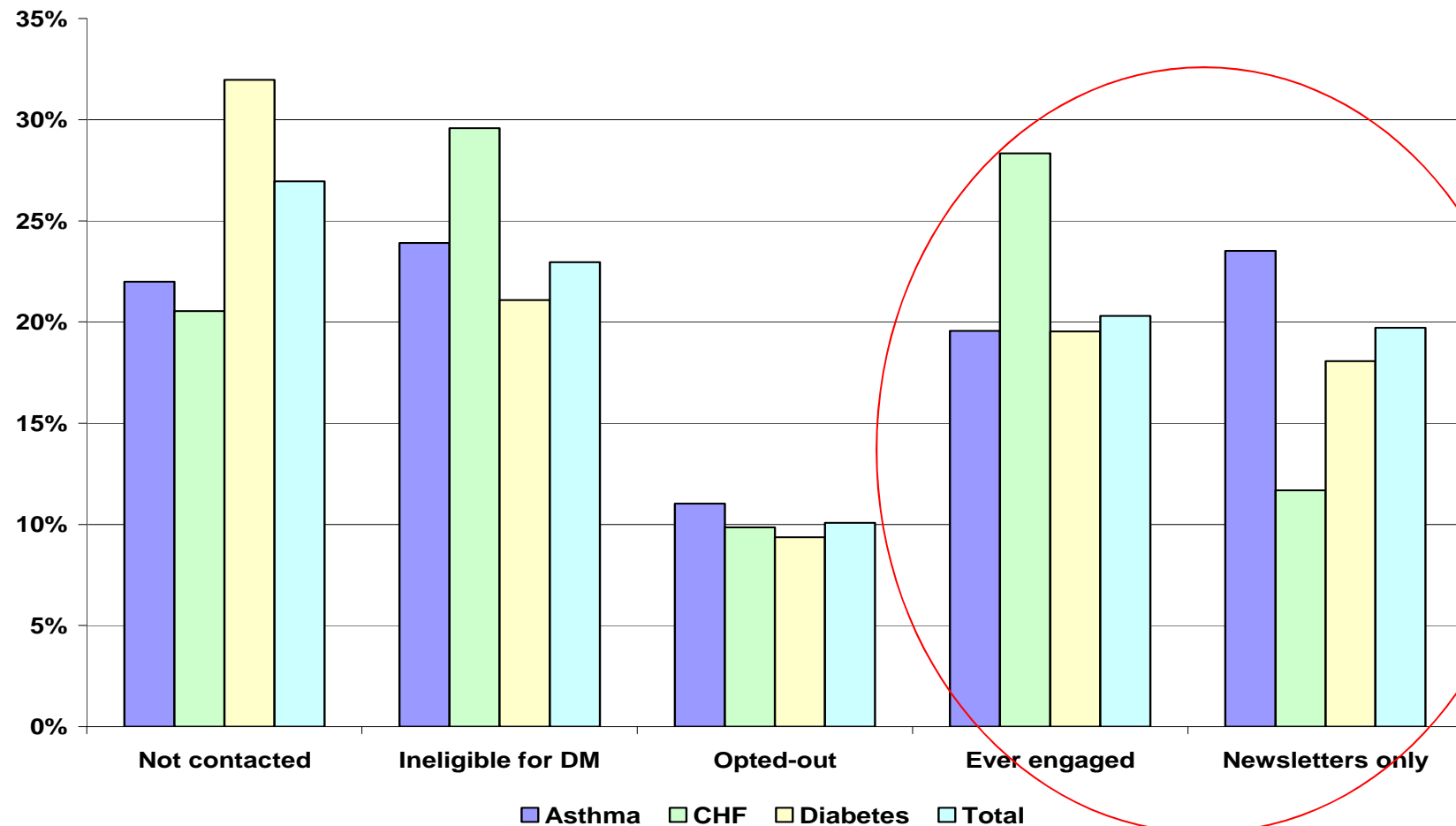
"Engaged" vs. "Newsletter"

- "Engaged" patients receive personalized care management
  - Baseline assessment
  - Goal setting
  - Follow-up phone calls
  - Educational materials
- "Newsletter" patients
  - Declined personalized care and only receive newsletters, *or*
  - Receive newsletters while in the process of being engaged

Legend: ☐ Engaged ☐ Newsletter

Asthma: 12,461 (Newsletter), 10,199 (Engaged)
CHF: 1,308 (Newsletter), 3,172 (Engaged)
Diabetes: 11,955 (Newsletter), 12,924 (Engaged)

*"Managed" patients as of Mar 2009

Status of present programs:
evaluation methods & outcomes

Evaluation Method: Background

- When comparing multiple "treatment" groups, need to control for variation in
  - Case mix
  - DM tenure mix
  - Exogenous regional factors
- Different outcome measurement units, denominators, and techniques to quantify DM impact
- Program impact hypothesized to start small and grow over time

Purpose of Scorecard

- Creates a common measurement system that incorporates different outcome measures

- Enables stakeholders to identify areas of strengths and weaknesses and create incentives for improvement

- Provides important feedback to enhance future planning

Knowledge Basis of DM Scorecard

- Scorecard items based on two reports:
  - Disease Management Program Evaluation Guide: Disease Management Association of America (2004)
  - Standard Outcome Metrics and Evaluation Methodology for Disease Management Programs, American Healthways and Johns Hopkins Consensus Conference. *Dis Manag* 2003;6(3):121-138
- Measures consistent w/ VA & DOD guidelines

Scorecard Template

Outcomes Category	Category Weight	DM Outcome Metrics (risk adjusted)	Outcome Metrics Weight	Overall Score
Utilization	30%	Emergency visits: Total disease–related emergency department visits per patient per year.	$ Weighted: - Asthma: 57% inpatient 43% emergency - CHF: 98% inpatient; 2% emergency - Diabetes: 70% inpatient; 30% emergency	
		Inpatient days: Total disease–related inpatient days per patient per year.		
Financial	30%	Medical cost: Cost per patient per year for treating the disease	100%	
Clinical	30%	Specific to targeted disease: Clinical measures such as use of medication or lab tests	100%	
Humanistic	10%	Program satisfaction: Patient response to question: *Thinking about all aspects your disease management program, how would you rate your experience overall?*	50%	
		Improved quality of life as self-assessed by survey response	25%	
		Improved understanding of disease and management of specific DM disease: Composite score from survey response	25%	
Total	**100%**			

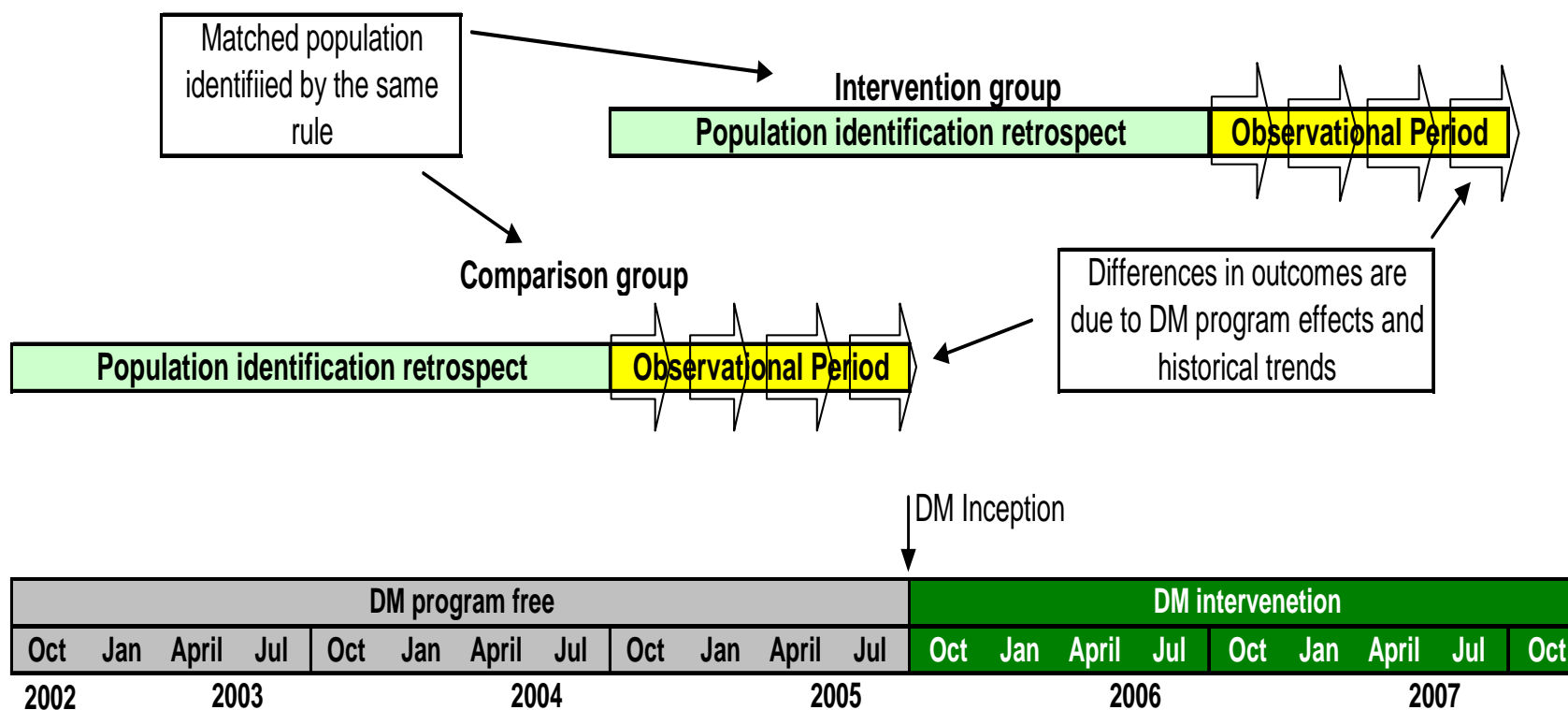# Data Sources for Outcome Metrics

- Utilization, financial, and clinical measures collected using administrative data
  - DEERS enrollment data
  - MDR administrative claims data (9-month lag time)
  - CDM (partial coverage) clinical data
- Humanistic measures from patient survey
  - Survey conducted Jul '08 – Aug '09
  - Patients who participated in DM for at least 6 months after baseline assessment
- MCSCs' Patient Tracking Database used to categorize patients by participation status

Evaluation Challenges

Challenges	Potential Bias or Complications	Strategies
Regression to the mean	Can artificially inflate estimates of DM impact	**Predictive models** based on historical control group: • Minimizes potential biases • Risk adjusts for case mix
Selection bias	Can be introduced by program administrators or patients; direction of bias unknown	
Case mix	Failure to control for patient case mix in terms of demographics, health status, etc. could lead to incorrect conclusion	
Varying DM tenure	Beneficiaries become eligible for and start DM at different times of the year	Annualize outcomes and control for DM tenure
High cost outliers	A small number of patients have very high medical costs; outlier cases can make the findings less robust	Sensitivity analysis conducted by excluding outliers
Small sample size	Limit study power	TRICARE DM sample sizes larger than that of most other DM studies

The Historical Control Group

Matched population identifiied by the same rule

Intervention group

| Population identification retrospect | Observational Period |

Comparison group

| Population identification retrospect | Observational Period |

Differences in outcomes are due to DM program effects and historical trends

DM Inception

DM program free												DM intervenetion								
Oct	Jan	April	Jul	Oct	Jan	April	Jul	Oct	Jan	April	Jul	Oct	Jan	April	Jul	Oct	Jan	April	Jul	Oct
2002		2003				2004				2005				2006				2007		

Final HCG: 12,343 asthma, 3,313 CHF, and 24,151 diabetes patients

Patient Characteristics, HCG v. DM
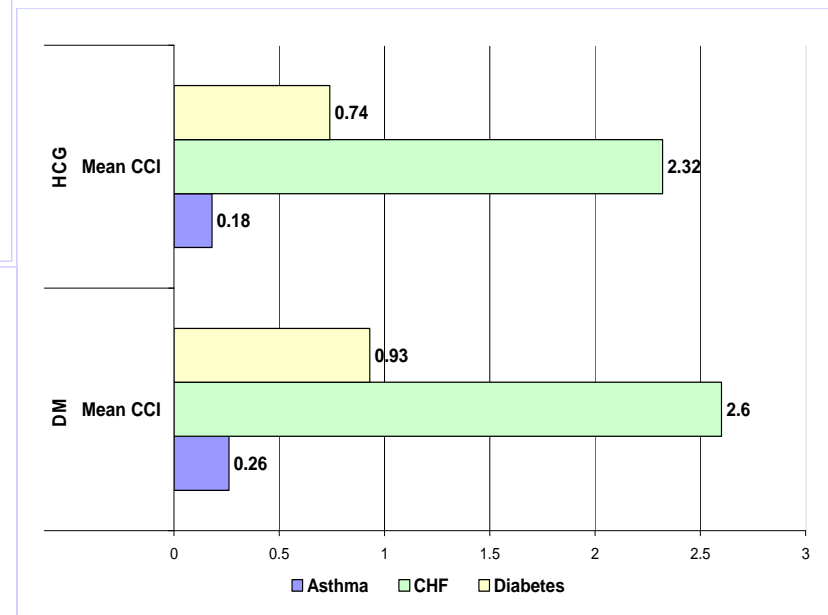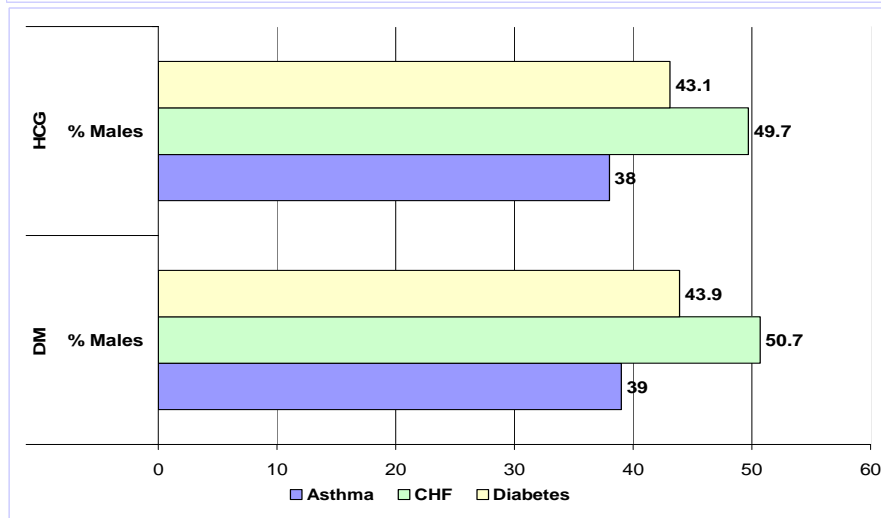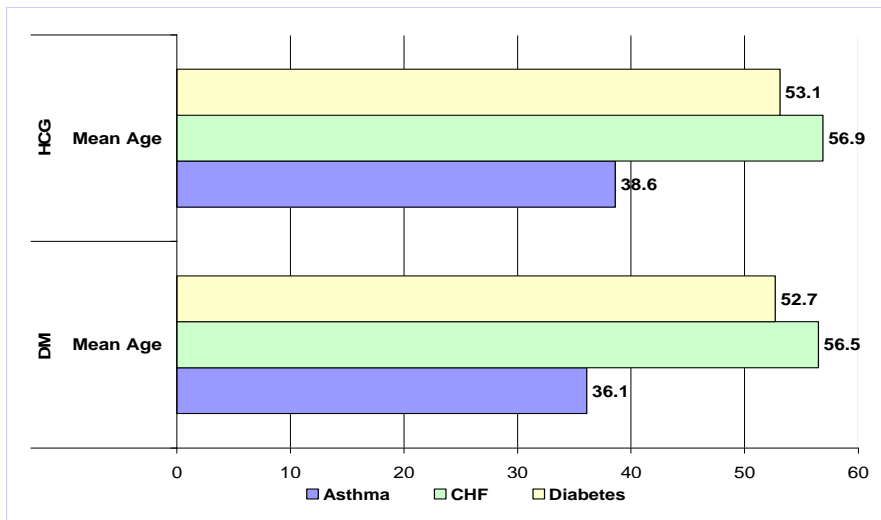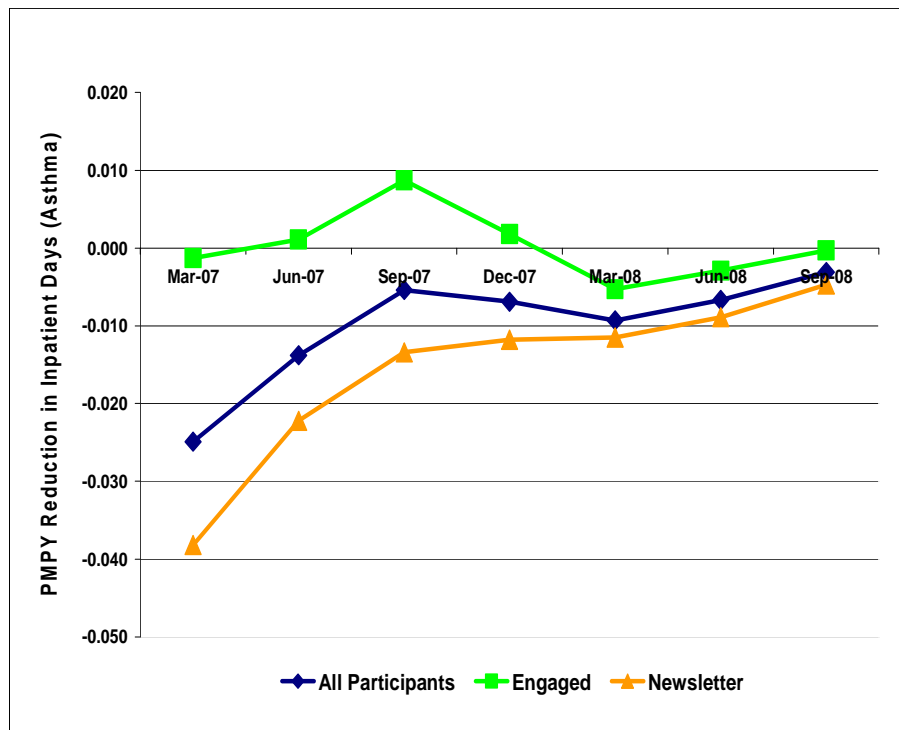

*CCI: Charlson Comorbidity Index

Asthma Scorecard

Metrics and Weights				Effect Size[†]			
Category	Category Weight	Outcome	Subcat. Weight	TRICARE	Region A	Region B	Region C
Utilization	30%	Emergency visits	43%	0.110 (0.092, 0.128)	0.167 (0.133, 0.200)	0.125 (0.096, 0.154)	0.000 (-0.033, 0.033)
		Inpatient days	57%	0.022 (0.004, 0.040)	0.066 (0.032, 0.099)	0.031 (0.002, 0.060)	0.000 (-0.033, 0.033)
Humanistic	10%	Patient satisfaction with DM services	50%	0.769 (0.716, 0.823)	0.700 (0.622, 0.778)	0.758 (0.666, 0.849)	1.035 (0.910, 1.161)
		Patient quality of life	25%	0.800 (0.746, 0.854)	0.741 (0.663, 0.819)	0.790 (0.698, 0.882)	1.014 (0.888, 1.139)
		Patient understanding and management of disease	25%	0.959 (0.905, 1.014)	0.911 (0.832, 0.99)	0.973 (0.880, 1.067)	1.056 (0.930, 1.182)
Financial	30%	Total disease-related cost	100%	0.179 (0.161, 0.197)	0.154 (0.120, 0.188)	0.164 (0.135, 0.193)	0.217 (0.183, 0.250)
Clinical	30%	Appropriate use of long-term controllers	50%	0.000 (-0.018, 0.018)	0.000 (-0.034, 0.034)	0.000 (-0.029, 0.029)	0.000 (-0.033, 0.033)
		Spirometry testing, based on claims data	50%	0.163 (0.145, 0.181)	0.148 (0.114, 0.181)	0.155 (0.125, 0.184)	0.194 (0.16, 0.227)
Weighted Total	100%			**0.178**	**0.177**	**0.176**	**0.197**

† Estimates for TRICARE overall include beneficiaries who transferred across regions, while transfers are excluded from the region-specific estimates.
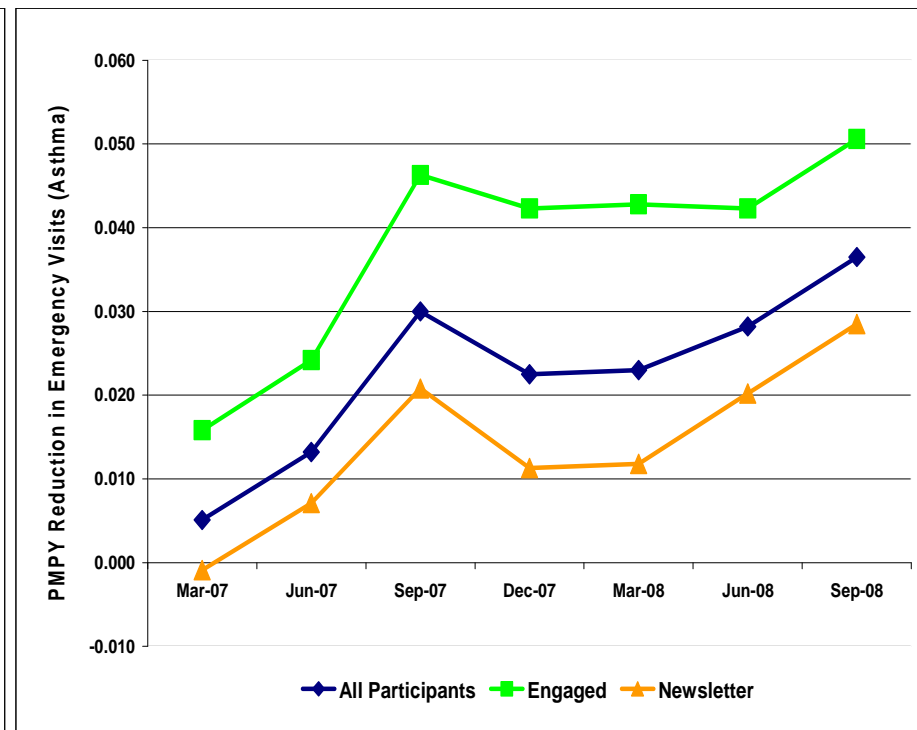
Avg. Annual Reductions in Utilization by Participation Group (Asthma)

Inpatient Days

ER Visits

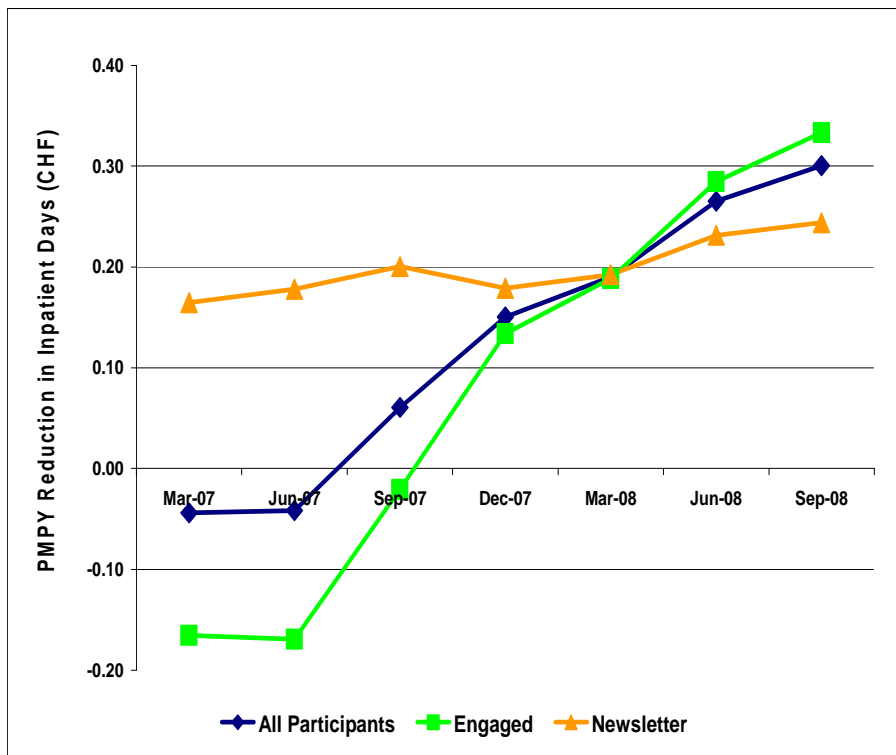***Analysis is based on the Initial Cohort**

CHF Scorecard

Metrics and Weights				Effect Size†			
Category	Category Weight	Outcome	Subcat. Weight	TRICARE	Region A	Region B	Region C
Utilization	30%	Emergency visits	2%	0.034 (-0.010, 0.077)	0.023 (-0.066, 0.112)	0.042 (-0.019, 0.102)	0.012 (-0.077, 0.101)
		Inpatient days	98%	0.021 (-0.023, 0.064)	0.052 (-0.037, 0.141)	0.023 (-0.038, 0.083)	0.000 (-0.089, 0.089)
Humanistic	10%	Patient satisfaction with DM services	50%	0.480 (0.383, 0.578)	0.629 (0.480, 0.777)	0.299 (0.147, 0.452)	0.688 (0.434, 0.942)
		Patient quality of life	25%	0.741 (0.641, 0.841)	0.924 (0.771, 1.077)	0.589 (0.434, 0.744)	0.741 (0.486, 0.996)
		Patient understanding & management of disease	25%	0.872 (0.771, 0.973)	1.028 (0.874, 1.183)	0.705 (0.549, 0.861)	0.977 (0.716, 1.238)
Financial	30%	Total disease-related cost	100%	0.033 (-0.011, 0.076)	0.042 (-0.047, 0.131)	0.073 (0.012, 0.134)	0.000 (-0.089, 0.089)
Clinical	30%	ACE inhibitor prescription rates	50%	0.116 (0.073, 0.160)	0.048 (-0.041, 0.137)	0.146 (0.085, 0.207)	0.099 (0.010, 0.188)
		Beta blocker prescription rates	50%	0.353 (0.310, 0.397)	0.279 (0.189, 0.368)	0.357 (0.296, 0.418)	0.416 (0.326, 0.506)
Weighted Total	100%			**0.151**	**0.157**	**0.152**	**0.155**

† Estimates for TRICARE overall include beneficiaries who transferred across regions, while transfers are excluded from the region-specific estimates.
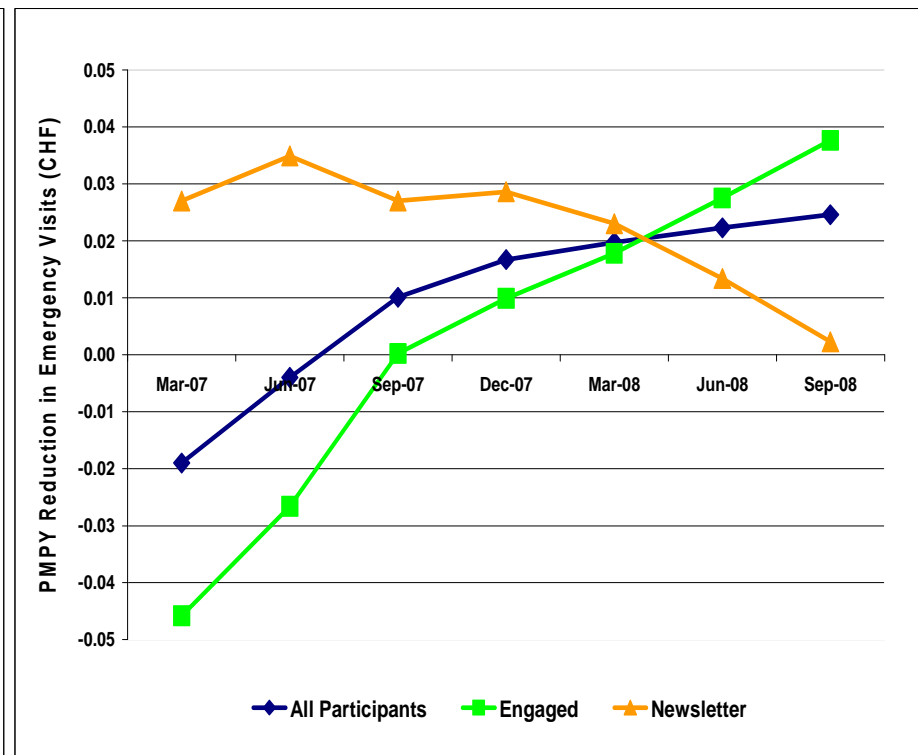
Avg. Ann. Reductions in Utilization by Participation Group (CHF)

Inpatient Days

ER Visits

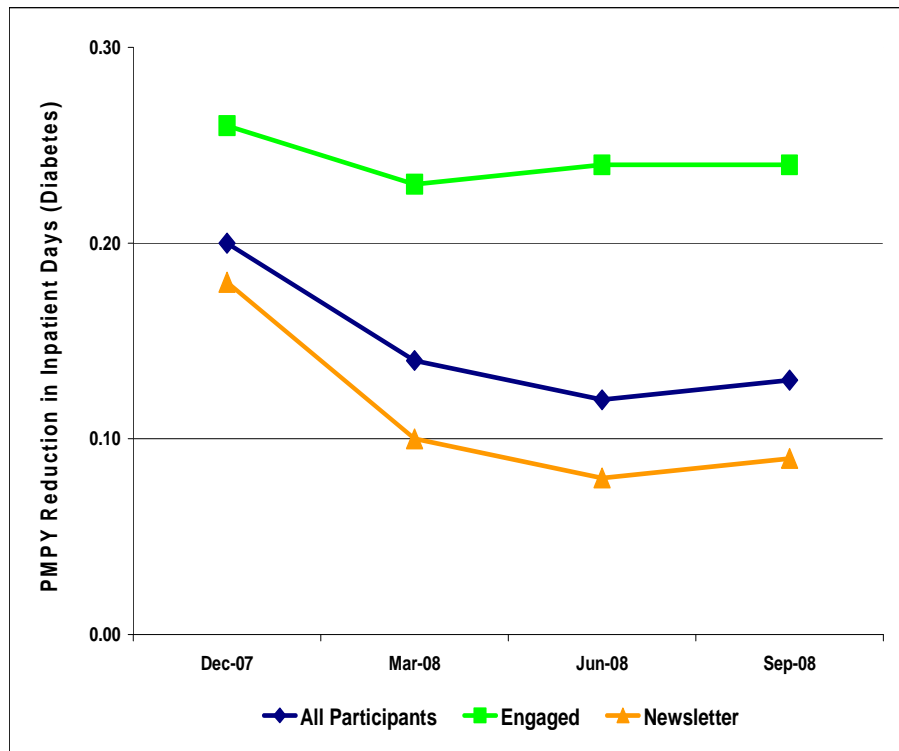***Analysis is based on the Initial Cohort**

Diabetes Scorecard

Metrics and Weights				Effect Size†			
Category	Category Weight	Outcome	Subcat. Weight	TRICARE	Region A	Region B	Region C
Utilization	30%	Emergency visits	11%	0.000 (-0.016, 0.016)	0.008 (-0.025, 0.041)	0.000 (-0.023, 0.023)	0.000 (-0.033, 0.033)
		Inpatient days	89%	0.015 (-0.002, 0.031)	0.026 (-0.007, 0.059)	0.000 (-0.023, 0.023)	0.067 (0.034, 0.100)
Humanistic	10%	Patient satisfaction with DM services	50%	0.617 (0.565, 0.669)	0.596 (0.504, 0.688)	0.520 (0.446, 0.595)	1.063 (0.937, 1.188)
		Patient quality of life	25%	0.864 (0.811, 0.918)	0.871 (0.776, 0.965)	0.763 (0.687, 0.838)	1.208 (1.081, 1.336)
		Patient understanding of disease and management of disease	25%	0.949 (0.895, 1.003)	0.940 (0.846, 1.035)	0.873 (0.796, 0.950)	1.266 (1.137, 1.395)
Financial	30%	Total health care cost	100%	0.052 (0.036, 0.068)	0.059 (0.026, 0.092)	0.050 (0.027, 0.073)	0.052 (0.019, 0.085)
Clinical	30%	HbA1c test rates	33.3%	0.062 (0.046, 0.078)	0.000 (-0.033, 0.033)	0.108 (0.085, 0.130)	0.028 (-0.005, 0.061)
		Annual dilated retinal exam rates	33.3%	0.074 (0.058, 0.090)	0.041 (0.008, 0.074)	0.093 (0.070, 0.116)	0.063 (0.030, 0.096)
		Microalbumin Urine test rates	33.3%	0.165 (0.149, 0.181)	0.176 (0.143, 0.209)	0.136 (0.113, 0.159)	0.207 (0.173, 0.240)
Weighted Total	100%			0.126	0.122	0.116	0.178

† Estimates for TRICARE overall include beneficiaries who transferred across regions, while transfers are excluded from the region-specific estimates.
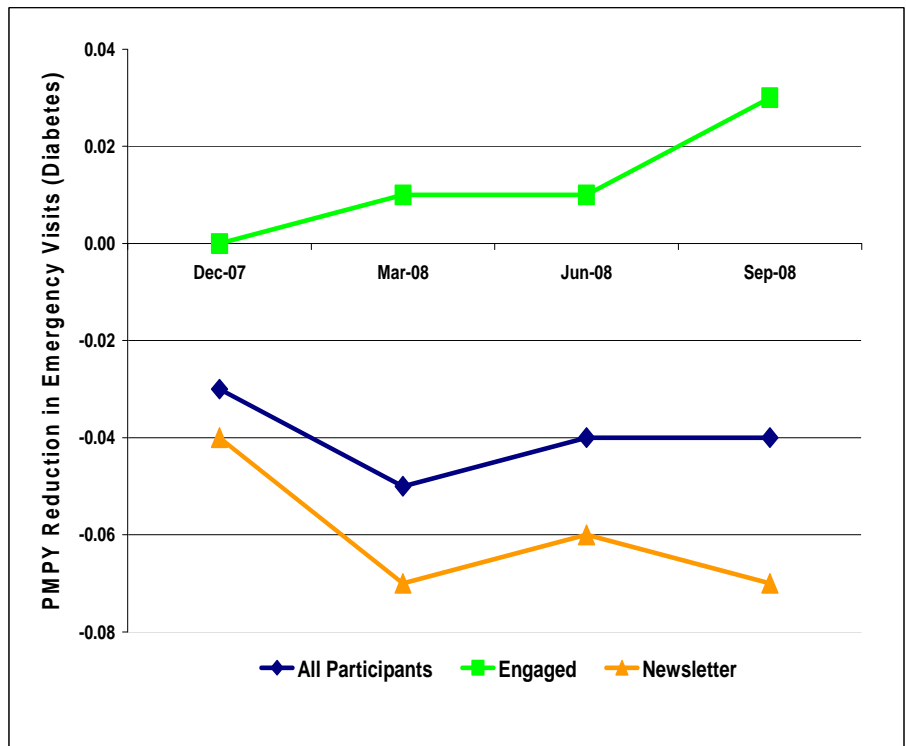
Avg. Ann. Reductions in Utilization by Participation Level (Diabetes)

Inpatient Days
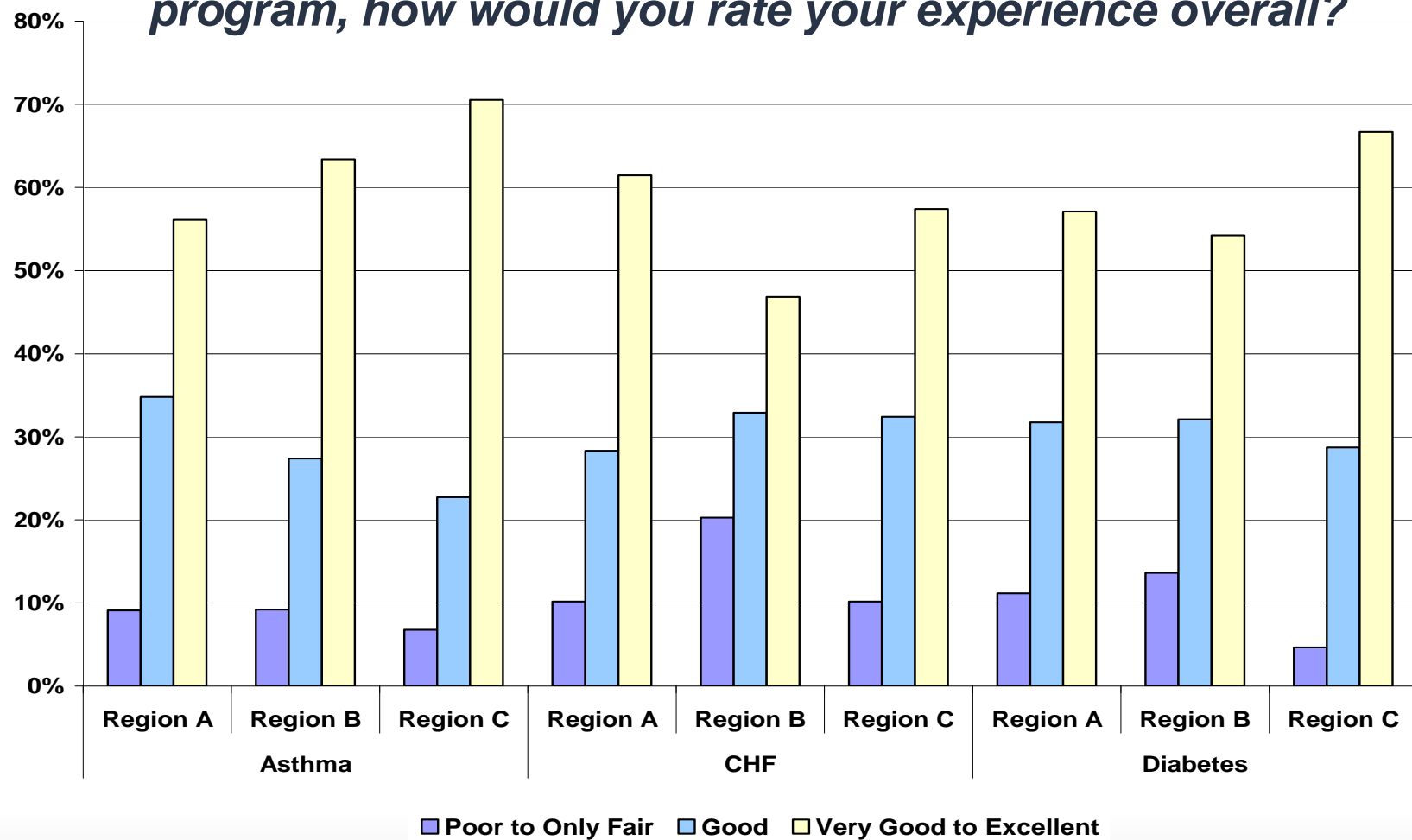

ER Visits

*Analysis is based on the Initial Cohort

Participant Satisfaction

Thinking about all aspects of your disease management program, how would you rate your experience overall?

Legend: ■ Poor to Only Fair ■ Good □ Very Good to Excellent

Return On Investment (as of 9/08)

	Savings per Person ($)	# of patients managed[a]	Total Estimated Savings[b]($)	Annual Total Cost[c] ($)	Cumulative Total Cost[d] ($)	Net Benefit ($)	ROI
Asthma	$453	23,793	$11,501,300	$4,136,769	$8,273,500	$3,227,800	1.39
CHF	$371	4,092	$1,544,300	$1,415,029	$2,830,100	-$1,285,800	0.55
Diabetes	$783	29,604	$15,455,900	$8,663,202	$11,550,900	$5,442,300	1.35
Total		57,489	$28,501,500	$14,215,000	$22,654,500	$9,677,500	1.26

a TMA total includes people who migrated across regions.
b Savings from Apr 2007-Sep 2008 (18 months) for asthma and CHF; Dec 2007-Sep 2008 (10 months) for diabetes
c FY 2008 Total cost does not include cost of TMA personnel managing the DM program
d Cumulative cost from Oct 2006-Sep 2008 (24 months) for asthma and CHF; from Jun 2007-Sep 2008 (16 months) for diabetes

Summary: Current Results

- Average, annual medical savings from DM after only 2 years of program existence are modest but growing

- Estimated savings & ROI are somewhat lower but not inconsistent with estimates from the literature

- Documented improvement in clinical, utilization, and financial outcomes

- Participants report high levels of program satisfaction and perceive the information provided to be useful

DM program expansion

New Diseases

- Expansion underway to include
  - COPD
    - Started 9/09
  - Major depression
  - Panic disorder
  - Generalized anxiety disorder
  - Cancer screening
    - Breast, cervical, colorectal

Expected summer '10

COPD Rationale

- Required by NDAA '07, Section 734
  - Specific requirement to address COPD
- COPD DM programs have been shown to be modestly effective[1]
  - improve exercise capacity, decrease risk of hospitalization, and moderately improved health-related quality of life
- There are evidence-based guidelines for management of COPD patients[2]

[1] Peytremann-Bridevaux I, Staeger P, Bridevaux P, et al. Effectiveness of COPD management programs: systematic review and meta-analysis. *Am J Med,* 2008;121(5):433-43.

[2] Sullivan SD. Global management guidelines and quality care indicators for asthma and COPD. *Managed Care*. 2005;4(7 Suppl Obstruc Lung):16-9.

COPD Treatment Guidelines

1. Assess and monitor disease
   a. Spirometry
   b. Identify comorbidities
2. Reduce Risk Factors
   a. Tobacco cessation
   b. Occupational exposures
   c. Environmental exposures

3. Manage Stable COPD
   a. Education
   b. Pharmacologic treatment
      i. bronchodilators
      ii. glucocorticosteroids
      iii. Oxygen
   c. Rehabilitation
4. Manage exacerbations
   a. Assessment of severity
   b. Home v. hospital
   c. Post-hospitalization follow-up

Source: Global Initiative for Chronic Obstructive Lung Disease, Chapter 5 in "Global Strategy for the Diagnosis, Management, and Prevention of COPD," 2008.

Tobacco Cessation in COPD

- Smoking cessation is the single most effective—and cost effective—way to reduce exposure to COPD risk factors.[1]

- Quitting smoking can prevent or delay the development of airflow limitation, or reduce its progression,[2] and can have a substantial effect on subsequent mortality.[3]

- Smoking cessation is the only intervention shown to slow disease progression.[4]

[1]Global Initiative for Chronic Obstructive Lung Disease, "Global Strategy for the Diagnosis, Management, and Prevention of COPD," 2008, p 43.

[2]Anthonisen NR, Connett JE, Kiley JP, et al. Effects of smoking intervention and the use of an inhaled anticholinergic bronchodilator on the rate of decline of FEV_1. *JAMA* 1994;272(19):1497-505.

[3]Anthonisen NR, Skeans MA, Wise RA, et al. The effects of smoking cessation intervention on 14.5 year mortality: a randomized clinical trial. *Ann Intern Med* 2005;142(4):233-9.

[4]Todd DC, McIvor RA, Pugsley SO, Cox G. Approach to chronic obstructive pulmonary disease in primary care. *Can Fam Physician*. 2008 May;54(5):706-11.

Estimated Top 20 Annual Diagnostic Prevalences In MHS COPD Population, by 3-Digit ICD-9 Groups

Diagnosis (ICD-9 codes)	Prevalence (%)	Diagnosis (ICD-9 codes)	Prevalence (%)
Bronchiectasis, alveolitis, other COPD (494-496)	72.4	Other diseases of respiratory system (510-519)	14.1
Bronchitis & emphysema (490-492)	42.8	Diseases of esophagus, stomach, & duodenum (530-537)	13.0
Hypertensive disease (401-405)	38.9	Arthropathies & related disorders (710-719)	12.0
Respiratory & chest symptoms (786)	27.2	Other forms of heart disease (415-427)	11.9
Hyperlipidemias (272)	23.1	Other diseases of upper respiratory tract (470-478)	11.0
Substance abuse disorders (303-305)	17.1	Dorsopathies (720-724)	10.8
Diabetes mellitus (250)	16.6	Pneumonia & influenza (480-487)	10.8
Asthma (493)	16.4	Other metabolic disorders (270-271)	8.9
Acute upper respiratory infections & bronchitis (460-466)	16.0	Heart failure (428)	7.6
Ischemic heart disease (410-414)	14.9		
Malaise, fatigue, sleep & general CNS symptoms (780)	14.5		

MHS COPD Population Definition

- Sources: HEDIS, MHSPHP, OCMO
- Any ICD-9-CM diagnosis of either chronic bronchitis or emphysema during the preceding 12 months that meets any of the following conditions:
  - One acute inpatient admission with a Dx of COPD in any position
  - Two outpatient visits (confirmed by E&M code) with a Dx of COPD in any position
  - One emergency (ER) visit (confirmed by E&M code) with a Dx of COPD in any position
  - No concurrent diagnosis of cystic fibrosis (ICD-9 exclusion codes in any position)
- Inclusion codes: 491.2x, 491.9, 492.x, 493.2x, 496
- Exclusions codes: 277.0x
- Confirmation E&M CPT codes:
  - ER Visit: 99281-99285
  - OP Visit: 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275

Corrections

Pearson Correlation Coefficients, N = 8652, Prob > |r| under H0: Rho=0				
	ER Visits	Hospital-izations	OP Visits	Rx Fills
ER Visits	1.00000	0.34225 p <.0001	0.06335 p <.0001	0.17030 p <.0001
Hospital-izations		1.00000	-0.02407 p= 0.0252	0.06680 p <.0001
OP Visits			1.00000	0.39255 p <.0001
Rx Fills				1.00000

Initial COPD Stratification List

Level		%
1	≤ 0 IP stays, 0 ER visits, & 9 OP visits, but if tobacco dependent, increase to level 2	41.7
2	≤ 1 IP stays, 1 ER visits, & 12 OP visits, but if tobacco dependent, increase to level 3	33.2
3	≤ 2 IP stays, 2 ER visits, & 15 OP visits, but if tobacco dependent, increase to level 4	17.1
4	≤ 3 IP stays, 4 ER visits, or ≥ 16 OP visits	6.7
5	≥ 4 IP stays, 5 ER visits (any number of OP visits)	1.3

All encounters, not just COPD-specific, are counted.

Rates of Tobacco Dependence, By Level, In Final Model

Level	# in level	Dependence (305.1 code)	# moved from lower level due to tobacco
1	17,480	0%	0
2	16,370	16.9%	2,760
3	5,705	39.3%	2,240
4	2,540	55.3%	965
5	1,165	31.8%	0

NOTE: Counts vary from following slide as they were generated from an earlier, analytic data set and do not include CDM smoking flag data.

Initial Stratified COPD Population, By Region

Level	North	South	West	Total
1	3,376	5,053	2,469	10,898
2	2,740	3,739	2,186	8,665
3	1,355	2,021	1,093	4,469
4	574	825	362	1,761
5	110	166	58	334
Total	8,155	11,804	6,168	**26,127**

Overall Depression & Anxiety Rationale

- Required by NDAA 2007, Section 734
    - Specific requirement to address depression and anxiety
- Depression and anxiety disorders generate increased costs[1,2]
    - High use of medical services
    - Physical manifestation of anxiety (chest pain, heart palpitations) often prompt expensive diagnostic procedures
- Life-time diagnosis of depression or anxiety increases likelihood of diagnosis with other major chronic disease[3]

[1] Greenberg PE, Kessler RC, Birnbaum HG, et al. The economic burden of depression in the United States: How did it change between 1990 and 2000? *J Clin Psychiatry* 2003; 64(12):1465-75.

[2] Kayton W., Roy-Byrne P, et al. Cost-effectiveness and cost offset of a collaborative care intervention for primary care patients with panic disorder. *Arch General Psychiatry*. 2002; 59:1098-104

[3] http://www.nimh.nih.gov/health/publications/the-numbers-count-mental-disorders-in-america/index.shtml#Anxiety

Depression & Anxiety DM Status

- Population definitions completed
- Stratification algorithm development work in progress

Cancer Screening

- Not a typical disease management disease
  - However, Congress accepted DoD proposal
- Will include
  - Pap smears
  - Mammograms
  - Colorectal screenings
- Intend to build on existing HEDIS tracking of same within MHSPHP

New Evaluation Contractor

- RTI took over from Lewin effective 1 Oct

- Currently, still in transition

- Will continue evaluation of asthma, CHF, & diabetes programs

- Will add evaluation of expansion DM programs

- Increased focus on evaluation and refinement of selection algorithms
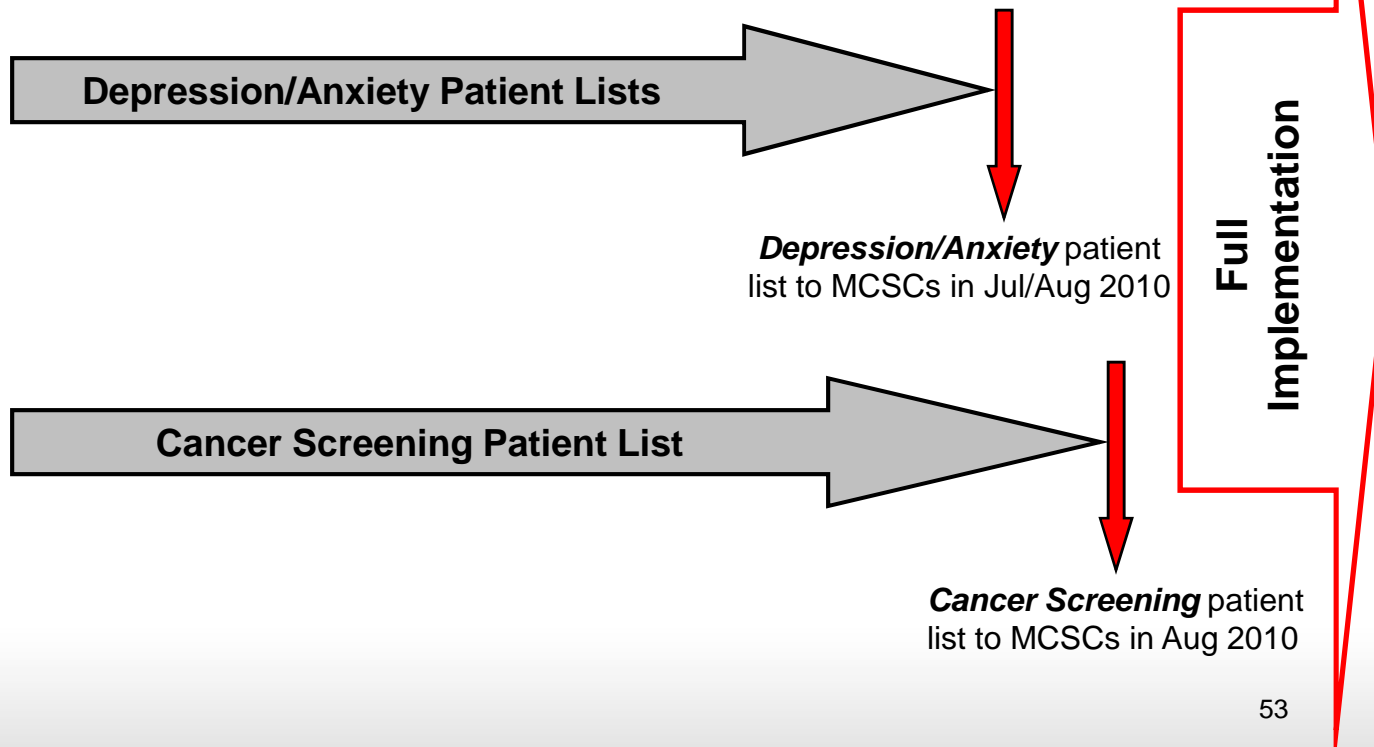
Next Steps

Implementation Timeline

2nd Qtr FY10			3rd Qtr FY10			4th Qtr FY10		
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

Already Completed:

1. Requisition package and contract modification for COPD

2. COPD program implementation

3. Final Lewin evaluations submitted for CHF, asthma, and diabetes

4. Transition to RTI as evaluation contractor

Depression/Anxiety Patient Lists

Depression/Anxiety patient list to MCSCs in Jul/Aug 2010

Cancer Screening Patient List

Cancer Screening patient list to MCSCs in Aug 2010

Full Implementation

Direct and Purchased Care Integration

- Improve communication and transparency
  - Military Health System Population Health Portal (MHSPHP)
  - Disease Management Advisory Council
  - Disease Management Summit

Population Health Portal and DM Data

- Military Health System Population Health Portal (MHSPHP) upgrades
  - Projected for late February 2010

- Explore further capabilities with MHSPHP
  - Include standard/extra beneficiaries
  - Testing of DM stratification algorithms within the MHSPHP

Disease Mgmt. Advisory Council

- To provide expert advice to senior leadership and oversight of the MHS Disease Management program.

- To provide a forum for communication and collaboration between the purchased care and direct care systems to facilitate an integrated MHS Disease Management program.

Disease Mgmt. Advisory Council

- ## Chairman

  - Chair, Medical Epidemiologist, Population Health and Medical Management, OCMO, TMA

- ## Team Members:

  - Medical Department Service Representatives (Air Force, Army, & Navy)
  - Representative, Population Health and Medical Management, OCMO, TMA
  - Representative, Health Plans Operations, TMA
  - Representatives of Medical Director, TROs (South, North, West)
  - Representative, US Family Health Plan Designated Provider Programs
  - Representative, MHS Population Health Portal
  - Representatives from each regional managed care support contractor

Disease Mgmt. Advisory Council

- ## Objectives:
  - To develop recommendations for DM implementation
  - To assist in the communication and collaboration between the TRICARE Regional Offices (TROs), Services, Designated Providers, and Managed Care Support Contractors (MCSCs) to ensure seamless integration between purchased care and direct care programs
  - To support, improve, and maintain healthcare and patient empowerment for specific disease and chronic conditions
  - To provide recommendations for policy development
  - To identify and manage initiatives and issues related to DM

Disease Mgmt. Advisory Council

- ## Objectives, continued:
  - To review data collection and formal evaluation and subsequently ensure dissemination of results
  - To consolidate MHS clinical quality and DM data for a Department of Defense (DoD) corporate view and make suggestions for improvement of MHS DM program
  - To review results of demonstration projects
  - To provide recommendations and oversight over making DM a covered benefit
  - To promote coordination and problem-solving on cross-service issues involving DM

DM Demonstration to Benefit

- **Demonstration Project to Benefit:**
  - Demonstration phase ends March 2011
  - Develop program phase through Code of Federal Regulation change
  - Continue gathering enough data to confidently define DM benefit

- **Medicare Population**
  - Includes strategies for disease and chronic care management for *all beneficiaries*

Questions?